

ABSTRACT OF THE DISCLOSURE

A planar optical waveguide includes a layered film formed on a substrate, and an optical waveguide core formed in the layered film. A cross section of the optical waveguide core is substantially quadrilateral, and a dopant layer including refractive index-lowering molecules is provided around the optical waveguide core. The refractive index-lowering molecules included in the dopant layer are unevenly distributed in the optical waveguide core with a concentration that is higher toward outer sides and corners of the optical waveguide core, whereby a graded-index optical waveguide is constituted.